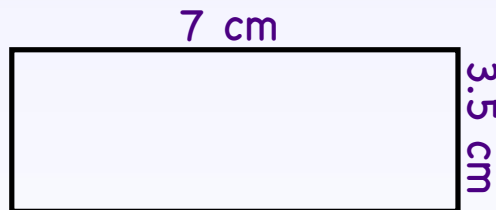
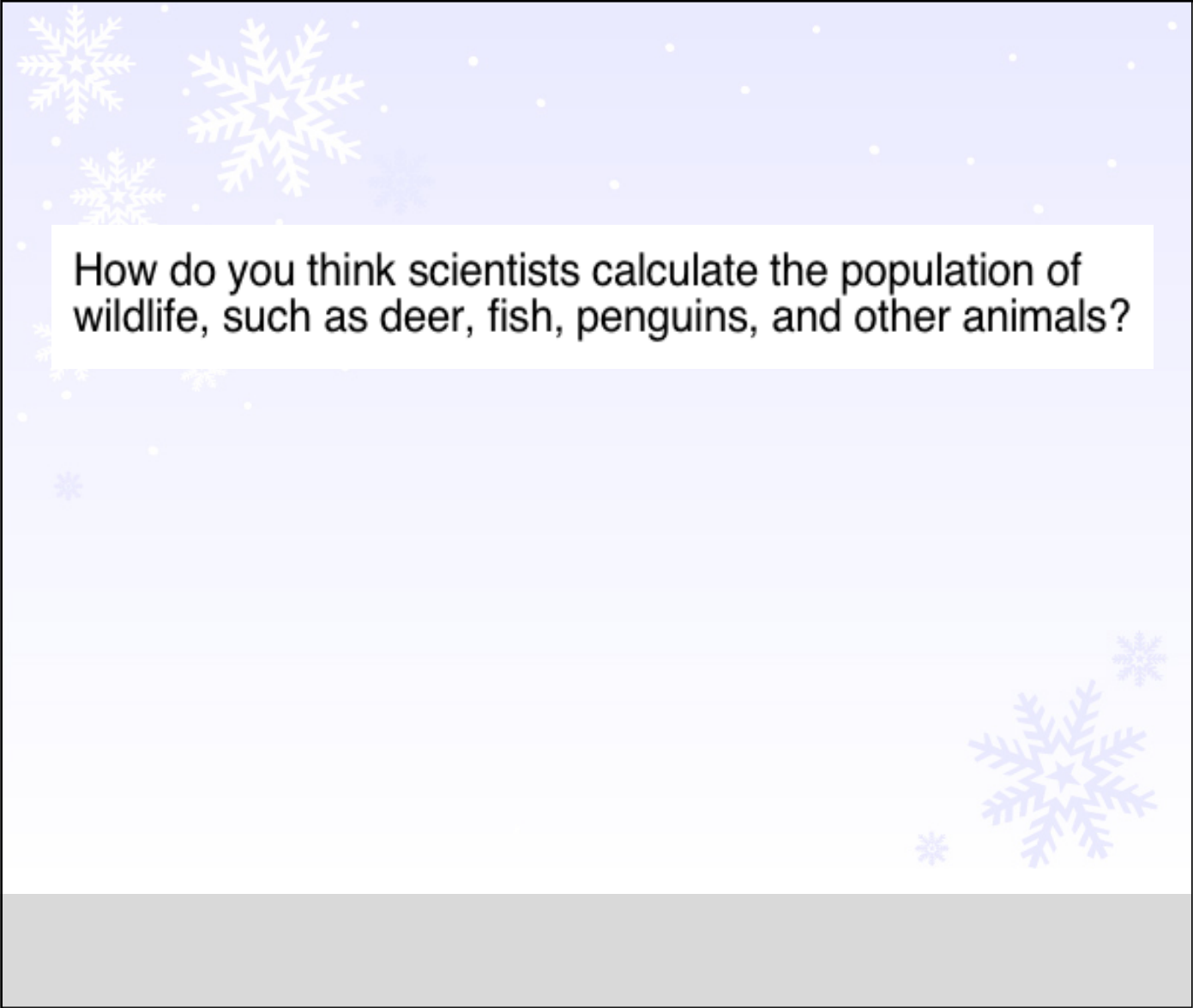


Warm-Up


1. Write your homework in your planner.
2. Convert the following percents to decimals.
a. 75% b. 3% c. .5% d. 6.24%
3. Double the rectangle below and then find the area and perimeter.



4. Classify the following as acute, obtuse, or right.
a. 90 b. 110 c. 12 d. 1 e. 180




How do you think scientists calculate the population of wildlife, such as deer, fish, penguins, and other animals?



Scientists often use a method called *Capture-Recapture* to calculate the population of wildlife.

Scientists begin by *capturing* a sample number of the animal and tagging them. Then they release the tagged specimens. Next the scientists *capture additional* samples. They count the number of animals in each sample and the number of those that are tagged. (The tagged animals are called *recaptured*.) After several samples have been collected, the scientists use a mathematical formula to estimate the actual population of the animal.



Original Captured
(original tagged)

Total Tagged
in samples (recaptured)

=

Number of Rockfish
in Chesapeake Bay

Total Captured
in samples

Exit Ticket Day 1

1. Solve the following proportion.

$$\frac{3.6}{10} = \frac{4.5}{x}$$


2. Mary likes to carry 3 pens for every 2 pencils so that she is prepared for every class. Mary want to stock up so she will have enough for the whole year. If Mary get a good deal on pencils and buys 42, how many pens will she need to buy?

Warm-Up Day 2

1. Use the formula $d=rt$. D=distance, r=rate, t-time. If you go 245 mile in 3 hours, how fast were you traveling?

2. $3/25$ convert this to a percent.

3. $x^2 - y + x(3 + y)$ Solve if given $x=2$ and $y=5$



Original Captured
(original tagged)

Total Tagged
in samples (recaptured)


=

Number of Rockfish
in Chesapeake Bay

Total Captured
in samples

Group Averages

Captured	Recaptured
Total =	Total =



Follow-Up Questions

How did your first estimate (from the beginning of Activity 4) compare with the actual amount?

What do you think would happen to your calculated amount if you were to increase the number of trials ?

What would happen to your calculated amount if some of the tags wore off?

What factors might effect the accuracy of this method of calculating animal populations in real-life situations?

The Capture - Recapture Method of estimating populations of animals works well with fish. For what other animals would this method work and why? With what animals would this method not work and why?

Day 2 Exit Ticket

1. You want to find the population of deer in a forest. You go out and tag 5 deer on the first day. You then go out 3 days later and see 12 deer but only 2 of which have tags. What is the estimated population based on this data?

2. A month ago your friends tagged 23 fish in a pond. Today, you go out and catch 7 fish, 5 of which have tags. What is the estimated population of fish in the lake?

